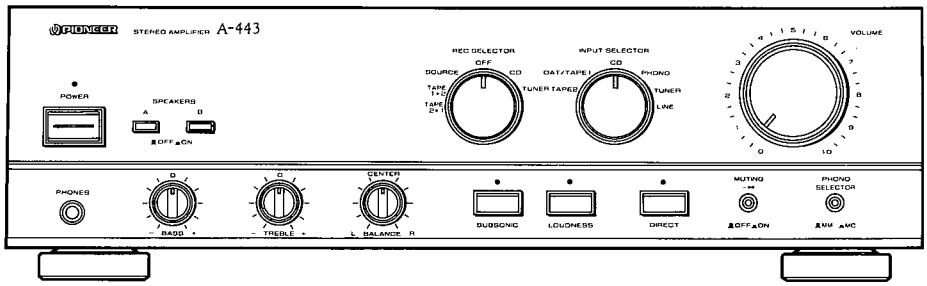
Operating Instructions

STEREO AMPLIFIER

A-443
A-333



The illustration shows model A-443.

Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE

[FOR U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

[For Canadian model]

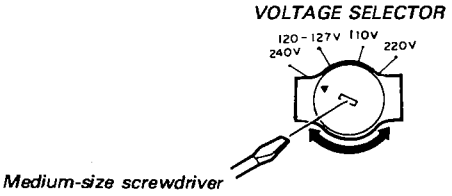
CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES EN PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

LINE VOLTAGE SELECTOR SWITCH

Only multi-voltage models are provided with this switch. U.S., Canadian, European, U.K., and Australian models are not provided with this switch.
Mains voltages in Saudi Arabia are 127V and 220V only. Never use this model with 110V setting in Saudi Arabia.
The line voltage selector switch is on the rear panel. Before your model is shipped from the factory, this switch is set to the power requirements of the destination. Check that it is set properly before plugging the power cord into the AC wall socket. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switch as follows.

1. Use a medium-size screwdriver.
2. Insert the screwdriver into the groove on the voltage selector, and adjust so that the tip of the arrow points to the voltage value for your area.



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The future of sound and vision.

IMPORTANT 1

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT 2

If the apparatus is fitted with AC mains power outlet(s), see REAR PANEL FACILITIES for convenient connection of additional Hi-Fi component(s). Make all connections to the AC outlet(s) and the signal terminals first. Connect the plug to the wall socket last, make sure that the power switch is off.

FOR USE IN THE UNITED KINGDOM

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured marking identifying the terminals in your plug proceed as follows:
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.
Equipment sold in the U.K. is not supplied with a power plug.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS — All the safety and operating instructions should be read before the appliance is operated.
RETAIN INSTRUCTIONS — The operating instructions should be retained for future reference.
HEED WARNING — All warnings on the appliance and in the operating instructions should be adhered to.
FOLLOW INSTRUCTIONS — All operating and use instructions should be followed.
WATER AND MOISTURE — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
LOCATION — The appliance should be installed in a stable location.
WALL OR CEILING MOUNTING — The appliance should not be mounted to a wall or ceiling.
VENTILATION — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
HEAT — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
POWER SOURCES — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
POWER-CORD PROTECTION — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
POLARIZATION — If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
CLEANING — The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.
POWER LINES — An outdoor antenna should be located away from power lines.
NONUSE PERIODS — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
OBJECT AND LIQUID ENTRY — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
DAMAGE REQUIRING SERVICE — The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped; or the enclosure damaged.

SERVICING — The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

OUTDOOR ANTENNA GROUNDING — If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

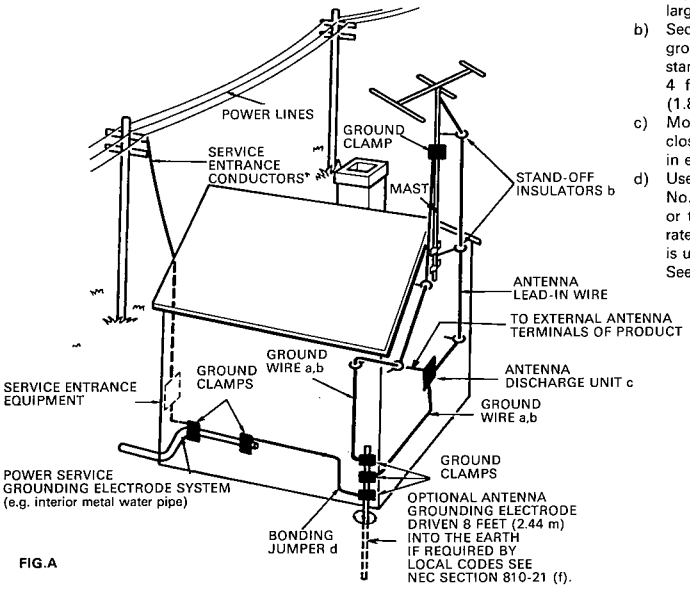
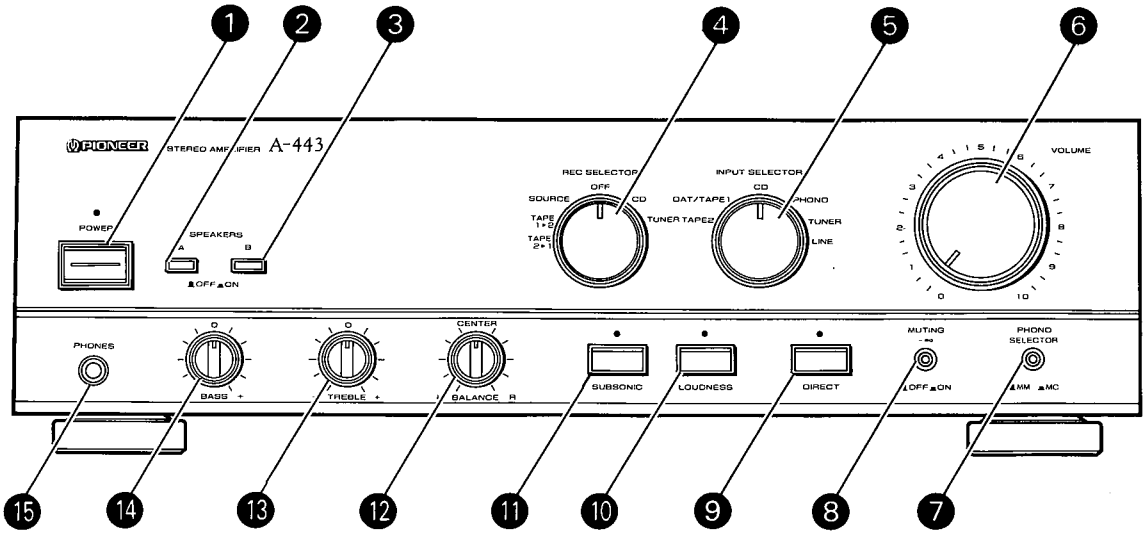
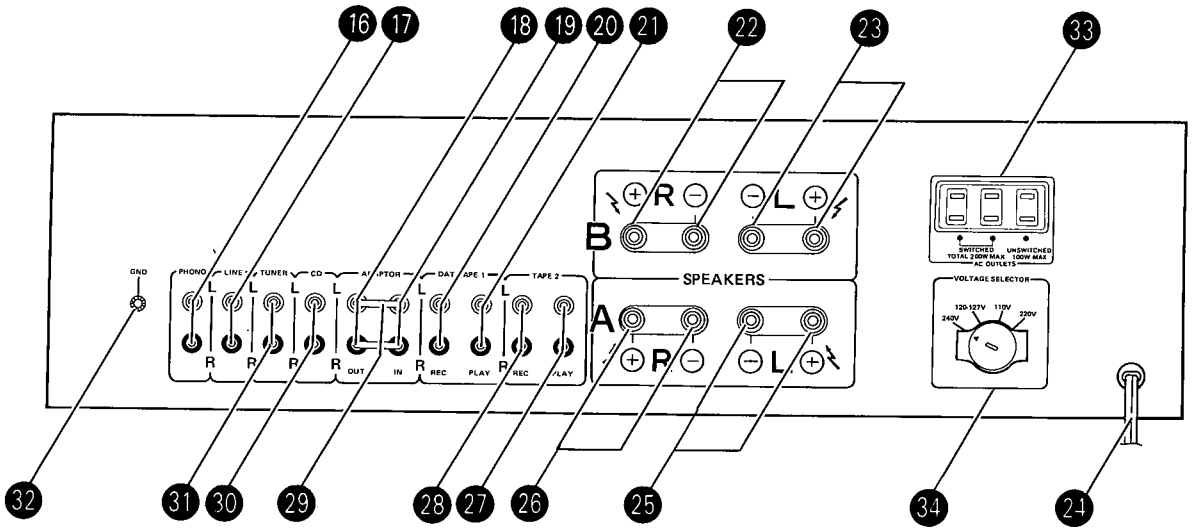

POWER LINES
GROUND CLAMP
SERVICE ENTRANCE CONDUCTORS*
MAST
STAND-OFF INSULATORS b
ANTENNA LEAD-IN WIRE
TO EXTERNAL ANTENNA TERMINALS OF PRODUCT
GROUND WIRE a,b
GROUND CLAMPS
SERVICE ENTRANCE EQUIPMENT
ANTENNA DISCHARGE UNIT c
GROUND WIRE a,b
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (e.g. interior metal water pipe)
OPTIONAL ANTENNA GROUNDING ELECTRODE DRIVEN 8 FEET (2.44 m) INTO THE EARTH IF REQUIRED BY LOCAL CODES SEE NEC SECTION 810-21 (f).
BONDING JUMPER d

FIG.A

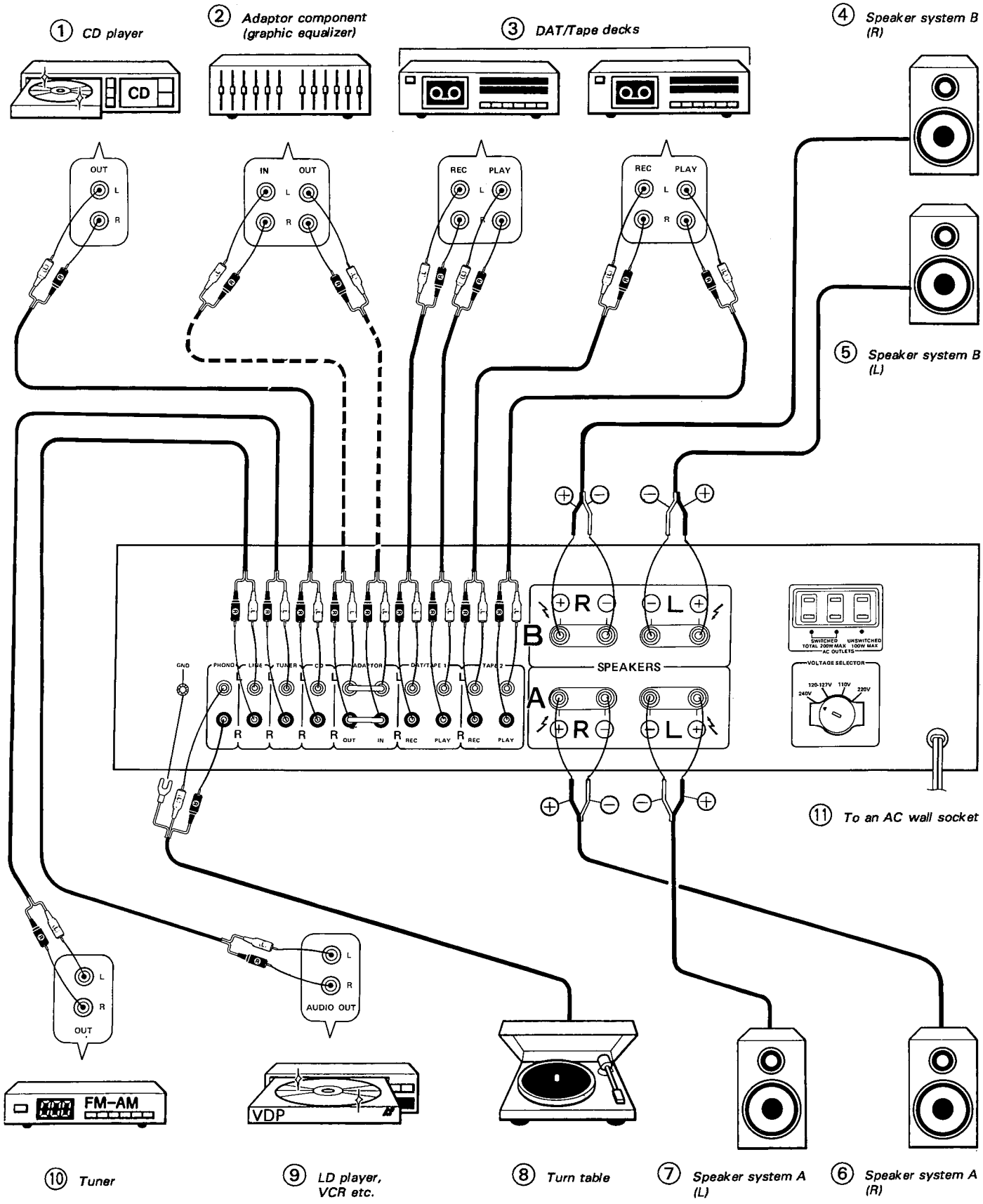
a) Use No. 10 AWG (5.3 mm^2) copper, No. 8 AWG (8.4 mm^2) aluminum, No. 17 AWG (1.0 mm^2) copperclad steel, bronze wire, or larger as ground wire.
b) Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.22 meters) to 6 feet (1.83 meters) apart.
c) Mount antenna discharge unit as closely as possible to where lead-in enters house.
d) Use jumper wire not smaller than No.6 AWG (13.3 mm^2) copper, or the equivalent, when a separate antenna-grounding electrode is used.
See NEC Section 810-21 (j).

The illustration shows model A-443.
Model A-333 is not equipped ❼, ❽ and ⓫.





The U.K. models (A-443 and A-333) are not equipped with ㉝, ㉞.


① CD player
② Adaptor component (graphic equalizer)
③ DAT/Tape decks
④ Speaker system B (R)
⑤ Speaker system B (L)
⑥ Speaker system A (R)
⑦ Speaker system A (L)
⑧ Turn table
⑨ LD player, VCR etc.
⑩ Tuner
⑪ To an AC wall socket
OUT
IN
REC
PLAY
SPEAKERS
AUDIO OUT
FM-AM
VDP

CONTENTS

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FEATURES

- Drive capacity 100W + 100W/4Ω (DIN) matching to high power and low impedance type speaker system. [model A-333 . . . 72W + 72W/4Ω (DIN)]
- The use of a DIRECT circuit assures high fidelity playback of consistent frequency characteristics, accompanied by maximum clarity.
- REC selector switch makes tape editing very simple.
- Non-Switching Circuit Type II (A-443 only) is employed to realize high-quality sound with minimum distortion.
- Comes with a built-in phono equalizer which accepts MC cartridges. (A-443 only)
- Honeycomb Frame Chassis
- Honeycomb Heat Sink

PANEL FACILITIES

See page 3 for Panel Facilities.

[FRONT PANEL]

❶ POWER switch/indicator
Press to turn power to the unit ON and OFF.

❷ SPEAKERS A selector switch
Use this switch to listen to the speaker systems connected to the SPEAKERS A terminals.

ON (▬) :
Depressed position: Sound is heard from the speaker systems.

OFF (■) :
Released position: No sound is heard from the speaker systems. Set to this position when listening with headphones.

❸ SPEAKERS B selector switch
Use this switch to listen to the speaker systems connected to the SPEAKERS B terminals.

ON (▬) :
Depressed position: Sound is heard from the speaker systems.

OFF (■) :
Released position: No sound is heard from the speaker systems. Set to this position when listening with headphones.

❹ REC SELECTOR switch
When this switch is set to a position other than SOURCE or OFF, the equipment selected by the REC SELECTOR switch can be recorded from, irrespective of the settings of the INPUT SELECTOR and DIRECT switches.

TUNER:
To record from the equipment connected to TUNER terminals.

CD:
To record from the equipment connected to CD terminals.

OFF:
In this position, nothing from the REC terminals of DAT/TAPE 1 and TAPE 2 is output. Set to this position when not recording; the tape deck will be disconnected, improving sound quality.

SOURCE:
To record from the equipment selected by the INPUT SELECTOR switch.

TAPE:
1 ▶ 2 — To record (copy) from the tape deck of DAT/TAPE 1 terminals, to the tape deck of TAPE 2 terminals.

2 ▶ 1 — To record (copy) from the tape deck of TAPE 2 terminals, to the tape deck of DAT/TAPE 1 terminals.

❺ INPUT SELECTOR switch
Use to select the playback source.

LINE:
For playback with a component connected to the LINE terminals.

TUNER:
For AM or FM broadcast reception with a tuner.

PHONO:
For record playback with a turntable.

CD:
For compact disc playback with a CD player.

DAT/TAPE 1:
For playback with a tape deck or digital audio tape deck connected to the DAT/TAPE 1 terminals.

TAPE 2:
For playback with a tape deck connected to the TAPE 2 terminals.

❻ VOLUME control
Use to adjust the volume level.

NOTE:
This unit is equipped with a circuit that attenuates the LOUDNESS and TONE effect as volume is turned up.

❼ PHONO SELECTOR switch (Model A-443 only)
Set in accordance with the type of cartridge used with your turntable.

MM (■) :
Set to this position when using a moving magnet cartridge, or a moving coil cartridge with a high output of 1 mV or more.

MC (▬) :
Set to this position when using a moving coil cartridge.

❽ MUTING switch (Model A-443 only)
Use to temporarily cut sound volume.

ON (▬) :
The sound is cut off.

OFF (■) :
The sound will return to its previous volume.

⑨ DIRECT switch/indicator

Use this switch/indicator when you do not wish to pass the output from input terminal equipment through the various frequency adjusting circuits (SUBSONIC, BASS, TREBLE, BALANCE, LOUDNESS) and adaptor terminals (ADPT).

ON:

The indicator lights: The signals input through the input terminals are reproduced without passing through the various frequency adjusting circuits. This results in flat, pure sound which is a more faithful reproduction of the input source.

OFF:

The indicator goes out: The signal passes through the various frequency adjusting circuits.

⑩ LOUDNESS switch/indicator

Use when listening at low volume levels.

ON:

The indicator lights: Boosts low and high frequencies to give added punch to playback even at low volume levels.

OFF:

The indicator goes off: Should normally be left in this position.

NOTE:

This switch does not operate when the DIRECT switch is in the ON position.

⑪ SUBSONIC filter switch/indicator (Model A-443 only)

Use this switch when playing records with coarse grooves.

OFF:

Released position; leave in this position for normal playback.

ON:

Depressed position (the indicator lights). In this position, frequencies of 17 Hz and below are cut, eliminating super-low-frequency noise caused by coarse record grooves, and thus helping prevent sound distortion.

NOTE:

This switch does not operate when the DIRECT switch is in the ON position.

⑫ BALANCE control

Should normally be left in the center position. Adjust the balance if the sound is louder from one of the speakers. If the right side is louder, turn toward the L(left) position and if the left side is louder, turn toward the R(right) position.

NOTE:

This control does not operate when the DIRECT switch is in the ON position.

⑬ TREBLE tone control

Use to adjust the high-frequency tone. The center position is the flat (normal) position. When turned to the right, high-frequency tones are emphasized; when turned to the left, high-frequency tones are de-emphasized.

NOTE:

- *This control does not operate when the DIRECT switch is in the ON position.*
- *At volume levels lower than "4", the set tone control effect is obtained.*
  At volume levels higher than "4", the effect becomes increasingly weaker.

⑭ BASS tone control

Use to adjust the low-frequency tone. The center position is the flat (normal) position. When turned to the right, low-frequency tones are emphasized; when turned to the left, low-frequency tones are de-emphasized.

NOTE:

- *This control does not operate when the DIRECT switch is in the ON position.*
- *At volume levels lower than "4", the set tone control effect is obtained.*
  At volume levels higher than "4", the effect becomes increasingly weaker.

⑮ PHONES jack

When using headphones, insert the plug into this jack.

[REAR PANEL]

⑯ PHONO terminals.
⑰ LINE terminals.
⑱ ADAPTOR OUT terminals.
⑲ ADAPTOR IN terminals.
⑳ DAT/TAPE 1 REC terminals.
㉑ DAT/TAPE 1 PLAY terminals.
㉒ SPEAKERS B terminals (right channel).
㉓ SPEAKERS B terminals (left channel).
㉔ Power cord.

Connect this cord to an AC wall socket, or the AC outlet of an audio timer.

㉕ **SPEAKERS A terminals (left channel)**
㉖ **SPEAKERS A terminals (right channel)**
㉗ **TAPE 2 PLAY terminals.**
㉘ **TAPE 2 REC terminals.**
㉙ **Shorting bars.**
㉚ **CD terminals.**
㉛ **TUNER terminals.**
㉜ **Turntable ground terminal (GND).**
㉝ **AC OUTLETS**
㉞ **VOLTAGE SELECTOR**

AC OUTLETS (SWITCHED)

Power supplied through these outlets is turned on and off by the amplifier's POWER switch. Total electrical power consumption of connected equipment should not exceed 200 W.

AC OUTLET (UNSWITCHED)

Power flows continually to this outlet, regardless of whether the amplifier is swithced ON or OFF. Electrical power consumption of the connected equipment should not exceed 100 W.

The equipment should be disconnected by removing the power plug from the wall socket when not in regular use, e.g., when on vacation.

NOTE:
Do not connect appliances with high power consumption such as heaters, irons, or television sets to the AC OUTLETS in order to avoid overheating or fire risk.

CONNECTIONS

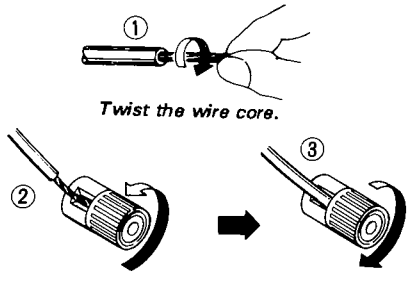
See page 4 for Connections.

① **CD player.**
② **Adaptor component (graphic equalizer).**
③ **DAT/Tape decks.**
④ **Speaker system B (R).**
⑤ **Speaker system B (L).**
⑥ **Speaker system A (R).**
⑦ **Speaker system A (L).**
⑧ **Turntable.**
⑨ **LD player VCR etc..**
⑩ **Tuner**
⑪ **To an AC wall socket.**

CONNECTING THE SPEAKER CORDS

1. Strip off the vinyl covering and twist the tip of the wire core.
2. Loosen the knob and insert the wire core into the terminal hole.
3. Tighten the knob to fix the wire core in place.

NOTE:
Do not allow the wire core to protrude and touch other terminals or wires. If the cores of differing wires touch, damage may be caused to your amplifier and/or speaker systems.

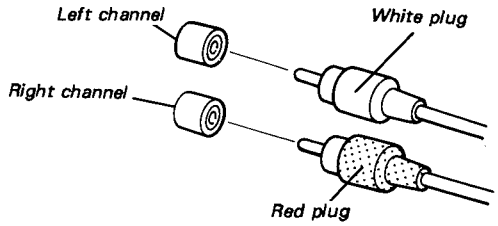


Speaker Impedance

When speaker systems are connected to only the SPEAKERS A or SPEAKERS B terminals, such speakers should have rated impedance in the range of 4—16Ω.
When speakers are connected to both the A and B terminals, they should have a rated impedance in the range of 8—32Ω.

CONNECTING THE INPUT/OUTPUT CORDS

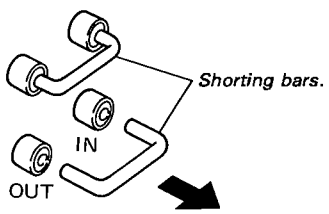
Connect the white plug to the L (left) side, and the red plug to the R (right) side. Be sure to push the plugs in securely.



The INPUT/OUTPUT jacks of this unit are dull tinplated, aiming at high audio quality.

TO USE THE COMPONENT CONNECTED TO THE ADAPTOR TERMINALS

1. Set the POWER switch to OFF.
2. Remove the two shorting bars from the adaptor terminals.



NOTE:
Remove the shorting bars before connecting an equalizer to these terminals. Always keep the bars inserted while the terminals are not in use, and take care not to lose them.

OPERATIONS

BEFORE BEGINNING OPERATIONS

Set the controls and switches as follows: See page 3.

1. Set the POWER switch ❶ to ON.
2. Press the SPEAKERS A selector switch ❷, SPEAKERS B selector switch ❸, or both switches.
3. Set the BALANCE control ⓬ to the center position.
4. Set the DIRECT switch ❾ to OFF.

PLAYBACK PROCEDURES

1. **Set the INPUT SELECTOR switch ❺ to the desired playback source.**

- For playback with the equipment connected to the LINE terminals: Set to [LINE].
- For reception of an AM/FM broadcast: Set to [TUNER].
- For playback of a record: Set to [PHONO].
  Set the PHONO SELECTOR switch ❼ to MM (▬) or MC (▬) according to the type of cartridge being used. (A-443 only)
- For playback of a compact disc: Set to [CD]
- For playback of a tape: Set to [DAT/TAPE 1] or [TAPE 2].

2. **Operate the equipment to begin playback.**
3. **Adjust playback volume with the VOLUME control ❻ on this unit.**

RECORDING TAPES:

1. **Select the recording equipment with the REC SELECTOR switch ❹.**

- When set to SOURCE, the signals from the device connected to the terminals of the selected input are recorded. (To record signals from the device connected to the PHONO or LINE terminals, set the REC SELECTOR switch to SOURCE and set the INPUT SELECTOR switch to PHONO or LINE.)
- Recording is impossible when the switch is set to OFF.

NOTE:
When REC SELECTOR switch is set to a position other than SOURCE or OFF, the equipment selected by the REC SELECTOR switch can be recorded from, irrespective of the settings of the INPUT SELECTOR and DIRECT switches.

2. **Begin recording by operating the recording equipment and tape deck.**

- Refer to the operating instructions for your tape deck for proper operating procedures.

MONITORING WHILE RECORDING

On a 3-head tape deck, sound can be concurrently heard while recording on tape. SELECTOR operation of checking the sound quality and recording level is called "monitoring." For monitoring, the INPUT SELECTOR switch of this unit must be set to the tape deck on which recording is being done.

DAT/TAPE 1 terminals: Set to DAT/TAPE 1.

- When recording with the tape deck connected to the TAPE 2 terminals: Set to TAPE 2.

NOTE:
When recording from the PHONO or LINE source, recording monitor is not possible.

COPYING TAPES:

When two decks are used (or when using double cassette deck), you can record the sounds from one deck onto the other.

Application examples:

- To make a tape copy with contents identical to the original tape.
- To edit a recording of an FM broadcast in order to cut out unwanted commercials, recording only desired material onto another tape.

When using two tape decks

1. **Load tapes for playback (pre-recorded tape) and recording (blank tape) into the respective tape decks.**
2. **Select the copying direction with the REC SELECTOR switch ❹.**

- When copying from the tape deck of the DAT/TAPE 1 terminals to the tape deck of the TAPE 2 terminals: Set to 1 ▶ 2.
- When copying from the tape deck of the TAPE 2 terminals to the tape deck of the DAT/TAPE 1 terminals: Set to 2 ▶ 1.

NOTE:
The tape input selected with the REC SELECTOR switch can be copied, regardless of the settings of INPUT SELECTOR and DIRECT switches.

3. Operate the tape decks to begin copying.
Set the tape deck with the original (playback) tape to the playback mode, and set the tape deck with the blank tape to the recording mode.

Playback using a graphic equalizer

- The sound of all sources can be finely adjusted with a graphic equalizer connected to the ADAPTOR terminals. However, the graphic equalizer is bypassed when the DIRECT switch is ON.

NOTE:
Be sure to perform this operation with the adaptor component power switch in the ON position. Even when not using the adaptor component, its power switch must be left ON. If the adaptor component is switched OFF, no sound will be produced, or the playback sound will be distorted.

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used.
If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptom	Trouble	Remedy
No power supplied to unit	• Power plug is disconnected from outlet. • The component power plug has been plugged into another component power outlet (e.g. timer, etc.), but power to that unit is disconnected.	• Insert plug securely into outlet. • Turn on power to other component.
No sound	• Connecting cords are disconnected from terminals, or connected incorrectly. • Terminals, or connecting cords pin plugs are dirty. • The INPUT SELECTOR switch is not set to the desired input source. • Operation of other components is incorrect. • Both SPEAKERS selector switches are set to "OFF." • The power was turned on with the MUTING switch in the "ON" position (▬).	• Connect securely. • Clean terminals and plugs. • Set the switch correctly (PHONO, TUNER, CD, LINE, DAT/TAPE 1, TAPE 2). • Consult the operating instructions for the other components. • Set one switch or both switches to "ON." • Set the MUTING switch to the "OFF" position (■).
No sound from one speaker	• Connecting cords or speaker cords are disconnected on that side. • BALANCE control is set to one side.	• Connect securely. • Set BALANCE control to center position.
Can't record tapes	• The position of the REC SELECTOR switch is incorrect. • Connections are incorrect. • Operation of tape deck is incorrect.	• Set switch correctly (See section "RECORDING TAPES"). • Reconnect properly. • Consult the operating instructions for the tape deck.
Can't perform tape copying	• The position of the REC SELECTOR switch is incorrect. • Operation of tape decks is incorrect.	• Set switch correctly (See section "COPYING TAPES"). • Consult the operating instructions for the tape decks.

SPECIFICATIONS

[A-443]

Amplifier Section

Continuous power output (both channels driven at 20 Hz to 20 kHz) * *
- T.H.D. 0.008%, 8Ω ..... 60W + 60W *
- T.H.D. 0.02%, 4Ω ..... 80W + 80W *

DIN Continuous power output (both channels driven at 1 kHz)
- T.H.D. 1.0%, 8Ω ..... 70W + 70W
- T.H.D. 1.0%, 4Ω ..... 100W + 100W

Dynamic power output (on EIA dynamic test signal)
- 8Ω ..... 75W + 75W
- 4Ω ..... 110W + 110W
- 2Ω ..... 150W + 150W

Total harmonic distortion * *
- 20 Hz to 20 kHz, 60W, 8Ω ..... 0.008% *
- 20 Hz to 20 kHz, 80W, 4Ω ..... 0.02% *

Input sensitivity/impedance
- PHONO (MM) ..... 2.5 mV/50 kΩ
- PHONO (MC) 0.2 mV/100Ω
- CD, TUNER, LINE, TAPE ..... 150 mV/40 kΩ

PHONO overload level
- 1 kHz, T.H.D. 0.008% (MM/MC) ... 150 mV/12 mV

Output level/impedance
- TAPE REC, ADAPTOR OUTPUT .... 150 mV/2.2 kΩ

Frequency response
- PHONO (MM), 20 Hz to 20 kHz ..... ±0.3 dB
- PHONO (MC), 20 Hz to 20 kHz ..... ±0.5 dB
- CD, TUNER, LINE, TAPE 5Hz to 100 kHz .. $^{+0}_{-3}$ dB *

Tone control (volume control set at −40 dB position)
- BASS ..... ±8 dB (100 Hz)
- TREBLE ..... ±8 dB (10 kHz)

Loudness contour (volume control set at −40 dB position)
+5dB (100 Hz)/+3 dB (10 kHz)

Filter (SUBSONIC) ..... 17 Hz (12 dB/oct.)

Signal-to-Noise ratio (IHF short circuit, A network)
- PHONO (MM, 5 mV input/MC, 0.5 mV input) ..... 93 dB/74 dB * *
- CD, TUNER, LINE, TAPE ..... 107 dB * *

Signal-to-Noise ratio (DIN, continuous power/50 mW)
- PHONO (MM) ..... 74 dB/63 dB *
- CD, TUNER, LINE, TAPE ..... 87 dB/65 dB *

Power Supply/Miscellaneous

Power requirements
- U.K. model ..... a.c.240V, 50/60 Hz
- Other destination models .... AC 110V/120−127V, /220V/240V (switchable), 50/60 Hz

Power consumption 550W

Dimensions ..... 420(W) × 348(D) × 126(H) mm
16-1/2(W) × 13-11/16(D) × 4-15/16(H) in

Weight (without package) ..... 8.1 kg (17 lb 14 oz)

Accessories

Operating instructions 1

- Specifications and design subject to possible modification without notice, due to improvements.

* Measwred with the DIRECT switch set to ON.

* * Measured by Audio Spectrum Analyzer.

<ARB1102>

SPECIFICATIONS

[A-333]

Amplifier Section

Continuous power output (both channels driven at 20 Hz to 20 kHz) * *
- T.H.D. 0.02%, 8Ω ..... 40W + 40W *
- T.H.D. 0.03%, 4Ω ..... 50W + 50W *

DIN Continuous power output (both channels driven at 1 kHz)
- T.H.D. 1.0%, 8Ω ..... 55W + 55W
- T.H.D. 1.0%, 4Ω ..... 72W + 72W

Dynamic power output (on EIA dynamic test signal)
- 8Ω ..... 55W + 55W
- 4Ω ..... 90W + 90W
- 2Ω ..... 100W + 100W

Total harmonic distortion * *
- 20 Hz to 20 kHz, 40W, 8Ω ..... 0.02% *
- 20 Hz to 20 kHz, 50W, 4Ω ..... 0.03% *

Input sensitivity/impedance
- PHONO (MM) ..... 2.5 mV/50 kΩ
- CD, TUNER, LINE, TAPE ..... 150 mV/40 kΩ

PHONO overload level
- 1 kHz, T.H.D. 0.02% (MM) ..... 150 mV

Output level/impedance
- TAPE REC, ADAPTOR OUTPUT .... 150 mV/2.2 kΩ

Frequency response
- PHONO (MM), 20 Hz to 20 kHz ..... ±0.3 dB
- CD, TUNER, LINE, TAPE 5Hz to 100 kHz .. $^{+0}_{-3}$ dB *

Tone control (volume control set at −40 dB position)
- BASS ..... ±8 dB (100 Hz)
- TREBLE ..... ±8 dB (10 kHz)

Loudness contour (volume control set at −40 dB position)
+5dB (100 Hz)/+3 dB (10 kHz)

Signal-to-Noise ratio (IHF short circuit, A network)
- PHONO (MM, 5 mV input) ..... 89 dB *
- CD, TUNER, LINE, TAPE ..... 107 dB *

Signal-to-Noise ratio (DIN, continuous power/50 mW)
- PHONO (MM) ..... 73 dB/63 dB *
- CD, TUNER, LINE, TAPE ..... 86 dB/65 dB *

Power Supply/Miscellaneous

Power requirements
- U.K. model ..... a.c.240V, 50/60 Hz

Power consumption
- U.K. models 410W

Dimensions ..... 420(W) × 348(D) × 126(H) mm
16-1/2(W) × 13-11/16(D) × 4-15/16(H) in

Weight (without package) ..... 7.0 kg (17 lb 7 oz)

Accessories

Operating instructions 1

- Specifications and design subject to possible modification without notice due to improvements.

* Miasured with the DIRECT switch set to ON.

* * Measured by Audio Spectrum Analyzer.

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